

SECTION V-B - FM BROADCAST ENGINEERING DATA (Page 3)

10. Is a directional antenna proposed?

☒ Yes ☐ No

If Yes, attach as an Exhibit a statement with all data specified in 47 C.F.R. Section 73.316, including plot(s) and tabulations of the relative field.

Exhibit No.  
Fig. 2 A&B

Stmt. A

11. Will the proposed facility satisfy the requirements of 47 C.F.R. Sections 73.315(a) and (b)?

☒ Yes ☐ No

If No, attach as an Exhibit a request for waiver and justification therefor, including amounts and percentages of population and area that will not receive 3.16 mV/m service.

Exhibit No.  
N/A

12. Will the main studio be within the protected 3.16 mV/m field strength contour of this proposal?

☒ Yes ☐ No

If No, attach as an Exhibit justification pursuant to 47 C.F.R. Section 73.1125.

Exhibit No.  
N/A

13. (a) Does the proposed facility satisfy the requirements of 47 C.F.R. Section 73.207?

☐ Yes ☒ No

(b) If the answer to (a) is No, does 47 C.F.R. Section 73.213 apply?

☐ Yes ☒ No

(c) If the answer to (b) is Yes, attach as an Exhibit a justification, including a summary of previous waivers.

Exhibit No.  
N/A

(d) If the answer to (a) is No and the answer to (b) is No, attach as an Exhibit a statement describing the short spacing(s) and how it or they arose.

Exhibit No.  
N/A

(e) If authorization pursuant to 47 C.F.R. Section 73.215 is requested, attach as an Exhibit a complete engineering study to establish the lack of prohibited overlap of contours involving affected stations. The engineering study must include the following:

Exhibit No.  
Fig. 3 A&B

Stmt. B

- (1) Protected and interfering contours, in all directions (360 ), for the proposed operation.
- (2) Protected and interfering contours, over pertinent arcs, of all short-spaced assignments, applications and allotments, including a plot showing each transmitter location, with identifying call letters or file numbers, and indication of whether facility is operating or proposed. For vacant allotments, use the reference coordinates as the transmitter location.
- (3) When necessary to show more detail, an additional allocation study utilizing a map with a larger scale to clearly show prohibited overlap will not occur.
- (4) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
- (5) The official title(s) of the map(s) used in the exhibit(s).

14. Are there: (a) within 60 meters of the proposed antenna, any proposed or authorized FM or TV transmitters, or any nonbroadcast (except citizens band or amateur) radio stations; or (b) within the blanketing contour, any established commercial or government receiving stations, cable head-end facilities, or populated areas; or (c) within ten (10) kilometers of the proposed antenna, any proposed or authorized FM or TV transmitters which may produce receiver-induced intermodulation interference?

☒ Yes ☐ No

If Yes, attach as an Exhibit a description of any expected, undesired effects of operations and remedial steps to be pursued if necessary, and a statement accepting full responsibility for the elimination of any objectionable interference (including that caused by receiver-induced or other types of modulation) to facilities in existence or authorized or to radio receivers in use prior to grant of this application. (See 47 C.F.R. Sections 73.315(b), 73.316(e) and 73.318.)

Exhibit No.  
Stmt. C

15. Attach as an Exhibit a 75 minute series U.S. Geological Survey topographic quadrangle map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the requirements set forth in Instruction V. The map must further clearly and legibly display the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers.

Exhibit No.  
Fig. 4

16. Attach as an Exhibit *(name the source)* a map which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.  
Fig. 5

Pensacola 1:250,000 U.S.G.S.

(a) the proposed transmitter location, and the radials along which profile graphs have been prepared;

(b) the 3.16 mV/m and 1 mV/m predicted contours; and

(c) the legal boundaries of the principal community to be served.

17. Specify area in square kilometers (1 sq. mi. = 259 sq. km.) and population (latest census) within the predicted 1 mV/m contour.

Area 694 sq. km. Population 31,381

18. For an application involving an auxiliary facility only, attach as an Exhibit a map *(Sectional Aeronautical Chart or equivalent)* that shows clearly, legibly, and accurately, and with latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.  
N/A

(a) the proposed auxiliary 1 mV/m contour; and

(b) the 1 mV/m contour of the licensed main facility for which the applied-for facility will be auxiliary. Also specify the file number of the license.

19. Terrain and coverage data *(to be calculated in accordance with 47 C.F.R. Section 73.313)*

Source of terrain data: *(check only one box below)*

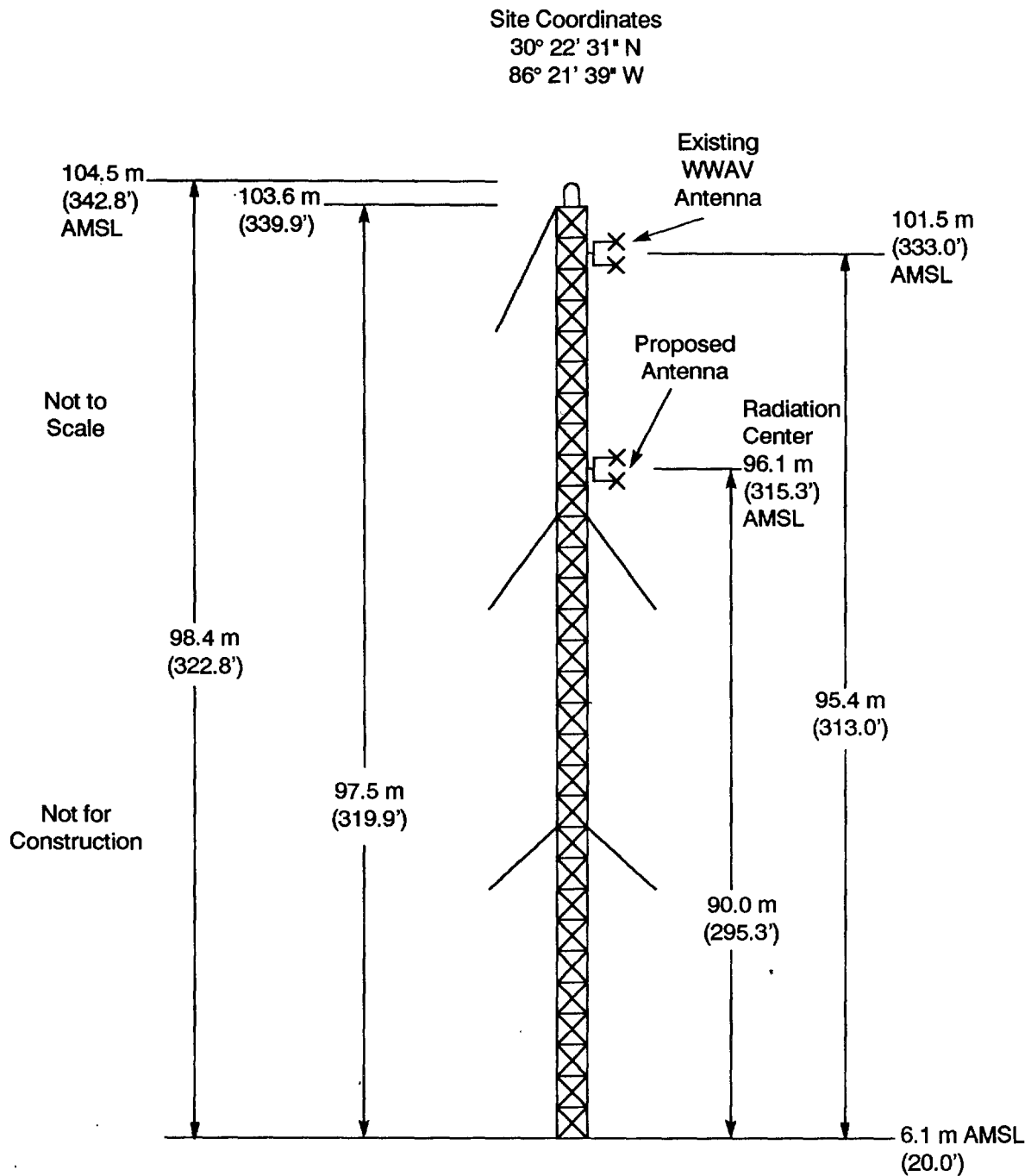
☒ Linearly interpolated 30-second database ☐ 75 minute topographic map

(Source: NGDC TPG-0050)

☐ Other *(briefly summarize)*

## SECTION V-B - FM BROADCAST ENGINEERING DATA (Page 5)

Radial bearing (degrees True)	Height of radiation center above average elevation of radial from 8 to 16 km (meters)	Predicted Distances	
		To the 8.16 mV/m contour (kilometers)	To the 1 mV/m contour (kilometers)
*	Site located in Miramar Beach		
0	90.2		
45	96.1		
90	95.8	See Table 1 for Contour Details	



**FIGURE 1**  
**ANTENNA SYSTEM ELEVATION PLAN**

prepared December 1991 for  
**Howard B. Dolgoff**  
Miramar Beach, Florida

Ch 292A 6.0 kW -DA (H&V) 95 m

**Lahm, Suffa & Cavell, Inc.**  
Consulting Engineers - Fairfax, VA

Statement A

**PROPOSED DIRECTIONAL ANTENNA**

prepared for  
**Howard B. Dolgoff**  
Miramar Beach, Florida

Ch 292A (106.3 MHz) 6.0 KW-DA (H&V) 95 m

Figure 2-A is a directional antenna horizontal plane envelope pattern which shows the permissible radiation from the proposed facility along all azimuths. This is a composite envelope, within which both the horizontally and vertically polarized radiation patterns will be contained. Upon grant of this application, an antenna will be designed to match this pattern as closely as possible without exceeding the pattern limits shown herein.

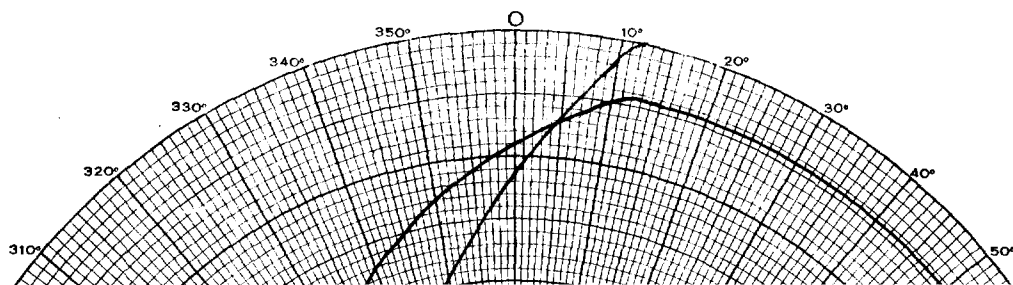
The proposed envelope pattern does not change by more than 2 dB per 10 degrees of azimuth. The ratio of maximum to minimum radiation is 8.5 dB, well below the 15 dB limit contained in Section 73.316 of the FCC Rules. Howard B. Dolgoff is proposing use of an ERI 2 bay rototiller antenna, which will be directionalized to accommodate the pattern requirements. This antenna is proposed to be obtained from the Harris Corporation (model FML-2E), but since ERI provides these antennas on an OEM basis to other vendors, a substitute supplier, manufacturer or antenna type may be specified following grant of this application. The antenna make, model and actual measured antenna pattern will be submitted with the Application for License to cover this construction.

The antenna will be side mounted on the existing WWAV tower in accordance with the installation instructions to be supplied by the manufacturer. The WWAV tower does not have a top mounted platform that exceeds the nominal cross sectional area of the tower itself. No other antennas will be mounted within the FM antenna aperture, nor will any other antenna be installed on the tower within the minimum vertical or horizontal distance specified by the FM antenna manufacturer as being necessary for proper directional operation. It is believed that there will be no significant interaction between the proposed antenna and the WWAV antenna, but if the manufacturer determines that greater isolation is necessary, Dolgoff will take any necessary steps to ensure that the proposed pattern is met. The pattern measurements performed by the manufacturer will duplicate as closely as

Statement A (con't)

possible the WWAV tower, including all pertinent structural members, and if necessary to assure proper operation, the WWAV antenna.

Figure 2-B is the vertical plane (elevation) radiation pattern for the proposed FM antenna. Table 1 is a tabulation of the horizontal plane pattern envelope, including minima and maxima. The tabulation includes radials at 1° increments over certain spans; these are to be considered "special radials" and included in pattern computations used to determine



ELECTRONICS RESEARCH, INC.  
100 MARKET STREET  
NEWBURGH, IN. 47630

-----THEORETICAL-----  
VERTICAL PLANE RELATIVE FIELD

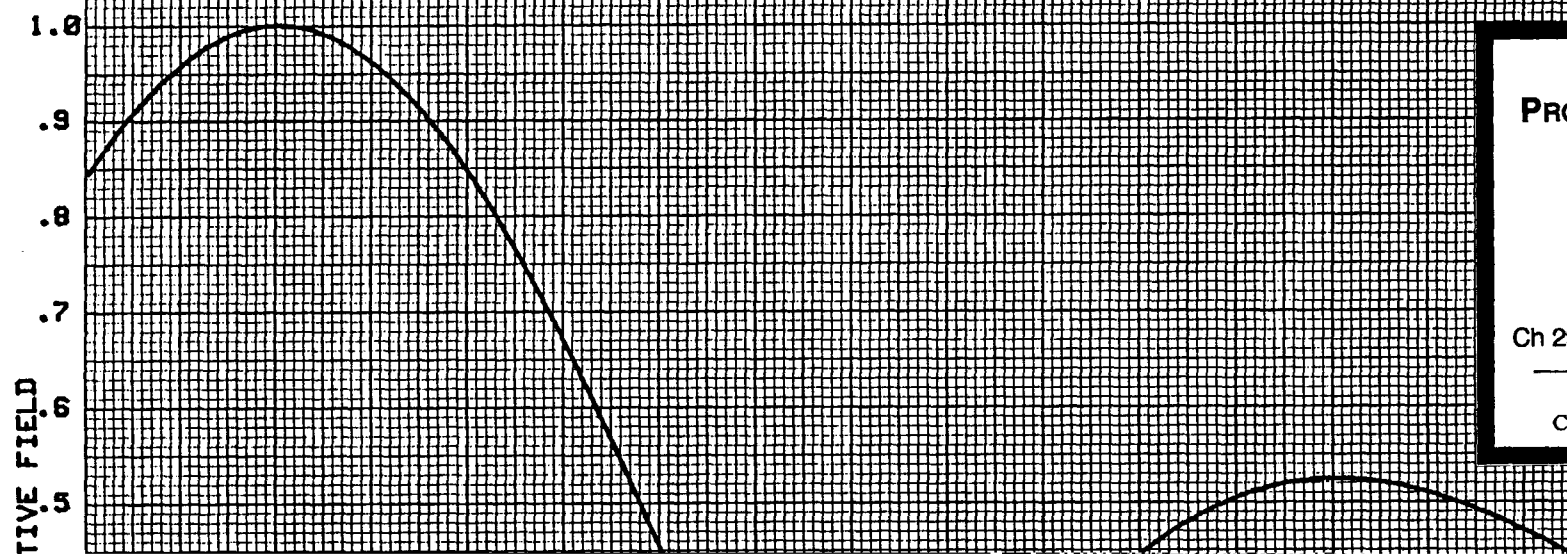
MAY 19, 1988

ELEMENT SPACING:  
1 WAVELENGTH

FIGURE 1

2 ROTOTILLER ELEMENTS WITH 0 DEGREE BEAM TILT  
0 PERCENT FIRST NULL FILL  
0 PERCENT SECOND NULL FILL

POWER GAIN IS .997 IN THE HORIZONTAL PLANE(.997 IN THE MAX.)



**FIGURE 2-B**  
**PROPOSED VERTICAL PLANE**  
**ANTENNA PATTERN**

prepared December 1991 for  
**Howard B. Dolgoff**  
Miramar Beach, Florida

Ch 292A 6.0 kW -DA (H&V) 95 m

Lahm, Suffa & Cavell, Inc.  
Consulting Engineers - Fairfax, VA



Table 1

**Directional Pattern Data**

prepared for

**Howard B. Dolgoff**

Miramar Beach, Florida

Ch 292A 6.0 KW-DA (H&V) 95 m

<u>Azimuth</u> <u>(deg true)</u>	<u>Power</u> <u>(dBK)</u>	<u>Relative</u> <u>Field</u>
0	5.50	0.769
5	6.50	0.863
10	7.50	0.968
11	7.70	0.991
** 12-261	7.78	1.000
270	6.00	0.815
275	5.00	0.726
280	4.00	0.647
285	3.00	0.577
290	2.00	0.514
295	1.00	0.458
297	0.60	0.438
300	0.30	0.423
301	0.20	0.418
302	0.10	0.413
303	0.00	0.408
304	-0.10	0.404
305	-0.20	0.399
306	-0.30	0.394
310	-0.50	0.385
** 315	-0.70	0.377
320	-0.50	0.385
325	-0.30	0.394
330	-0.30	0.394
334	0.30	0.423
335	0.50	0.433
340	1.50	0.485
345	2.50	0.545
350	3.50	0.611
355	4.50	0.685

\* Pattern Minima

\*\* Pattern Maxima

Statement B

**ALLOCATION CONSIDERATIONS**

prepared for  
**Howard B. Dolgoff**  
Miramar Beach, Florida

Ch 292A (106.3 MHz) 6.0 KW-DA (H&V) 95 m

The site proposed for use by Howard B. Dolgoff (Dolgoff) meets the separation requirements of Section 73.207 of the FCC Rules with respect to all stations except WKNU, Brewton, Alabama. With respect to WKNU, the reference point for the allotment was fully spaced as a 3 kilowatt facility, but did not meet the 6 kilowatt spacing requirements of Section 73.207. Therefore, with respect to WKNU, this allotment can be considered under Section 73.213 of the FCC Rules.

Dolgoff proposes the use of the existing WWAV tower at Miramar Beach. This tower is less than 1.6 kilometers short of the distance separation requirements of Section 73.213 towards WKNU. Therefore, Dolgoff is requesting processing under Section 73.215 of the FCC Rules (the "contour protection" Rules). The maps of Figures 3 A-B are allocation studies conducted in accordance with Section 73.215 of the FCC Rules. All contours were computed using NGDC 30 second terrain data at 2° azimuths over the spans

Table 2

**Proposed Coverage and Interfering Contours**

prepared for

**Howard B. Dolgoff**

Miramar Beach, Florida

Ch 292A 6.0 KW-DA (H&V) 95 M

<u>Azimuth</u> (deg. T)	Effective Antenna <u>Height</u> (m)	Effective Radiated <u>Power</u> (dBk)	<u>Contour Distances</u>					
			<u>100 dBu</u> (km)	<u>Interfering</u> <u>80 dBu</u> (km)	<u>54 dBu</u> (km)	<u>40 dBu</u> (km)	<u>Protected</u> <u>60 dBu</u> (km)	<u>70 dBu</u> (km)
0	90	5.50	2.3	7.5	36.3	76.8	24.0	13.3
5	90	6.50	2.4	8.0	38.5	80.3	25.2	14.1
10	91	7.50	2.6	8.5	41.2	84.2	26.6	15.0
11	92	7.70	2.6	8.7	41.8	85.0	27.1	15.3
12	93	7.78	2.7	8.8	42.2	85.4	27.3	15.4
45	96	7.78	2.7	8.9	42.9	86.1	27.8	15.8
90	96	7.78	2.7	8.9	42.9	86.1	27.7	15.8
135	96	7.78	2.7	8.9	42.9	86.1	27.8	15.8
180	96	7.78	2.7	8.9	42.9	86.1	27.8	15.8
225	96	7.78	2.7	8.9	42.9	86.1	27.8	15.8
260	96	7.78	2.7	8.9	42.9	86.1	27.8	15.8
261	96	7.78	2.7	8.9	42.9	86.1	27.8	15.8
270	96	6.00	2.4	8.0	38.6	79.6	25.3	14.2
275	95	5.00	2.3	7.5	36.2	75.8	23.9	13.3
280	93	4.00	2.1	7.1	33.6	72.1	22.5	12.5
285	95	3.00	2.0	6.7	31.8	68.8	21.5	11.9
290	96	2.00	1.8	6.4	30.0	65.6	20.4	11.3
295	96	1.00	1.7	6.1	28.4	62.4	19.3	10.7
297	96	0.60	1.7	5.9	27.8	61.2	18.9	10.5
300	96	0.30	1.6	5.8	27.3	60.4	18.6	10.3
301	96	0.20	1.6	5.8	27.2	60.1	18.4	10.3
302	96	0.10	1.6	5.8	27.0	59.8	18.3	10.2
303	96	0.00	1.5	5.7	26.8	59.5	18.2	10.1
304	96	-0.1	1.5	5.7	26.7	59.2	18.1	10.1
305	96	-0.2	1.5	5.7	26.5	59.0	18.0	10.0
306	96	-0.3	1.5	5.6	26.4	58.7	17.9	10.0
310	96	-0.5	1.5	5.6	26.1	58.1	17.7	9.9
315	96	-0.7	1.5	5.5	25.8	57.6	17.4	9.7
320	96	-0.5	1.5	5.6	26.2	58.2	17.7	9.9
325	96	-0.3	1.5	5.6	26.4	58.7	17.9	10.0

Table 2  
(con't)

<u>Azimuth</u> (deg. T)	Effective Antenna <u>Height</u> (m)	Effective Radiated <u>Power</u> (dBk)	<u>Contour Distances</u>					
			<u>Interfering</u>			<u>Protected</u>		
			<u>100 dBu</u> (km)	<u>80 dBu</u> (km)	<u>54 dBu</u> (km)	<u>40 dBu</u> (km)	<u>60 dBu</u> (km)	<u>70 dBu</u> (km)
330	95	-0.3	1.5	5.6	26.2	58.4	17.8	9.9
334	92	0.3	1.6	5.7	26.8	59.8	18.2	10.1
335	92	0.5	1.6	5.8	27.0	60.2	18.3	10.2
340	92	1.50	1.8	6.1	28.6	63.3	19.5	10.8
345	92	2.50	1.9	6.4	30.3	66.5	20.6	11.4
350	92	3.50	2	6.8	32.2	69.9	21.7	12.0
355	91	4.50	2.2	7.1	34.2	73.2	22.8	12.7

Table 3

**ALLOCATION STUDY CONTOUR LOCATION DATA**

prepared for  
**Howard B. Dolgoff**  
Miramar Beach, Florida

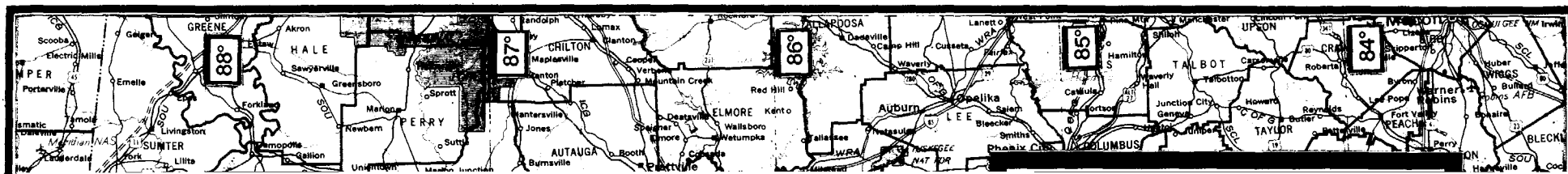
WKNV Brewton, AL Ch 29.2A  
6.0 kW, 100 m N 31° 06' 45" W 87° 01' 19"

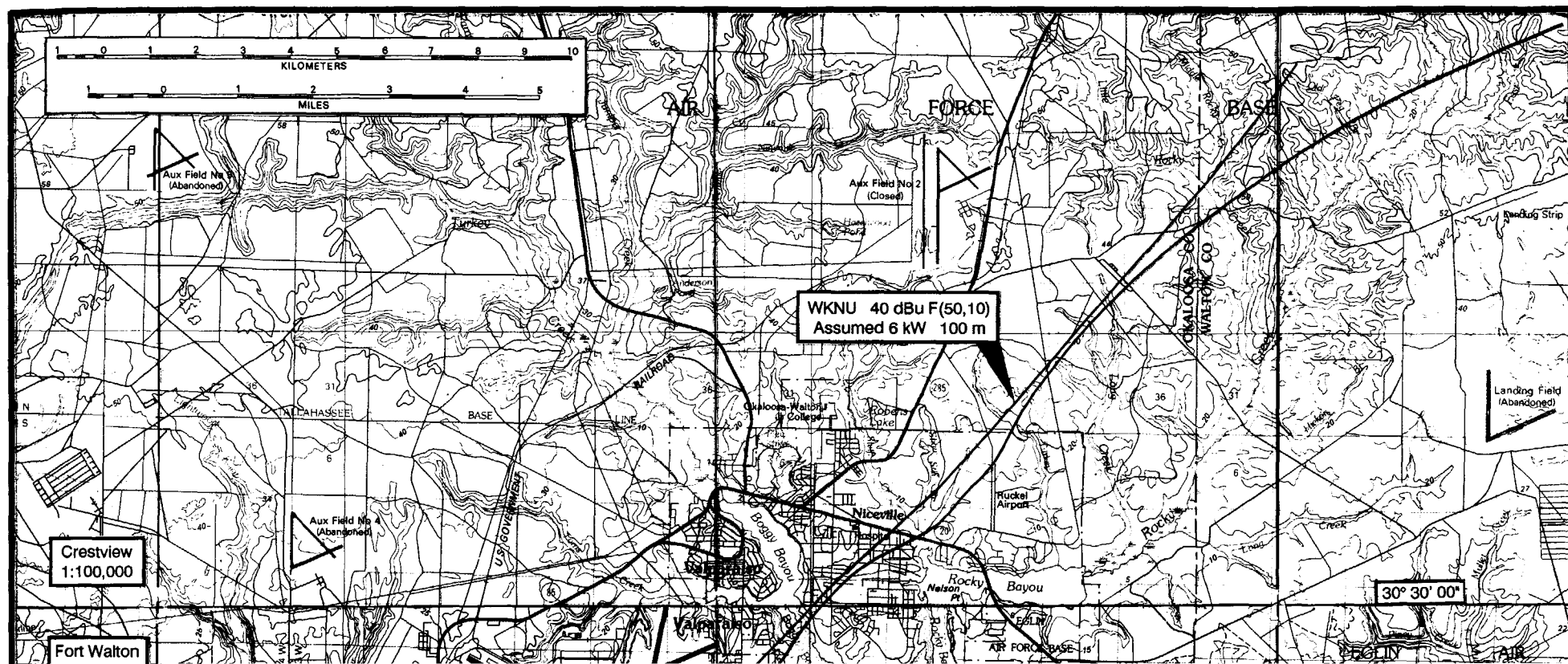
<u>Azimuth</u> (deg)	Effective Antenna <u>Height</u> (meters)	Effective Radiated <u>Power</u> (dBK)	<u>Contour Distances</u>	
			<u>60 dBu F(50,50)</u> (km)	<u>40 dBu F(50,10)</u> (km)
0	104.1	7.78	28.8	87.5
45	83.6	7.78	26.0	83.8
90	107.1	7.78	29.2	88.0
96	109.3	7.78	29.5	88.2
98	109.7	7.78	29.6	88.4
100	109.5	7.78	29.5	88.2
102	110.3	7.78	29.6	88.4
104	109.0	7.78	29.5	88.2
106	107.1	7.78	29.2	88.0
108	105.9	7.78	29.1	87.6
110	104.3	7.78	28.9	87.5
112	103.1	7.78	28.7	87.2
114	101.9	7.78	28.5	87.0
116	100.6	7.78	28.4	86.8
118	98.8	7.78	28.2	86.6
120	97.3	7.78	27.9	86.2
122	95.4	7.78	27.7	85.9
124	92.5	7.78	27.3	85.4
126	88.9	7.78	26.8	84.7
128	84.8	7.78	26.2	84.0
130	83.0	7.78	25.9	83.8
134	86.4	7.78	26.4	84.3
135	87.0	7.78	26.5	84.4
136	87.6	7.78	26.6	84.5
138	89.0	7.78	26.8	84.8
140	90.3	7.78	27.0	85.2
142	92.2	7.78	27.3	85.4
144	95.2	7.78	27.6	85.9
146	97.3	7.78	27.9	86.2
148	99.1	7.78	28.2	86.6
150	99.2	7.78	28.2	86.6
152	98.2	7.78	28.1	86.4
154	95.4	7.78	27.7	85.9
156	92.1	7.78	27.2	85.3
158	90.0	7.78	26.9	85.0
160	91.9	7.78	27.2	85.3
162	94.6	7.78	27.6	85.8
164	95.3	7.78	27.7	85.9
166	97.0	7.78	27.9	86.2

Table 3  
(con't)

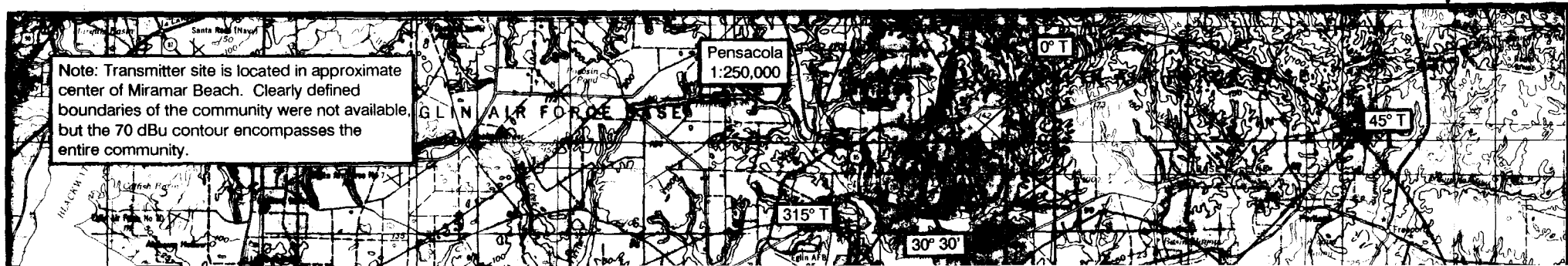
<u>Azimuth</u> (deg)	Effective Antenna <u>Height</u> (meters)	Effective Radiated <u>Power</u> (dBK)	<u>Contour Distances</u>	
			<u>60 dBu F(50,50)</u> (km)	<u>40 dBu F(50,10)</u> (km)
168	98.4	7.78	28.1	86.6
170	99.7	7.78	28.3	86.6
172	100.6	7.78	28.4	86.8
174	107.78	7.78	28.4	86.8
176	100.8	7.78	28.4	86.8
178	100.6	7.78	28.4	86.8
180	98.4	7.78	28.1	86.6
182	96.3	7.78	27.8	86.1
184	94.5	7.78	27.6	85.8
186	92.4	7.78	27.3	85.4
188	92.4	7.78	27.3	85.4
225	123.2	7.78	31.1	90.4
270	92.3	7.78	27.3	85.4
315	94.1	7.78	27.6	85.7

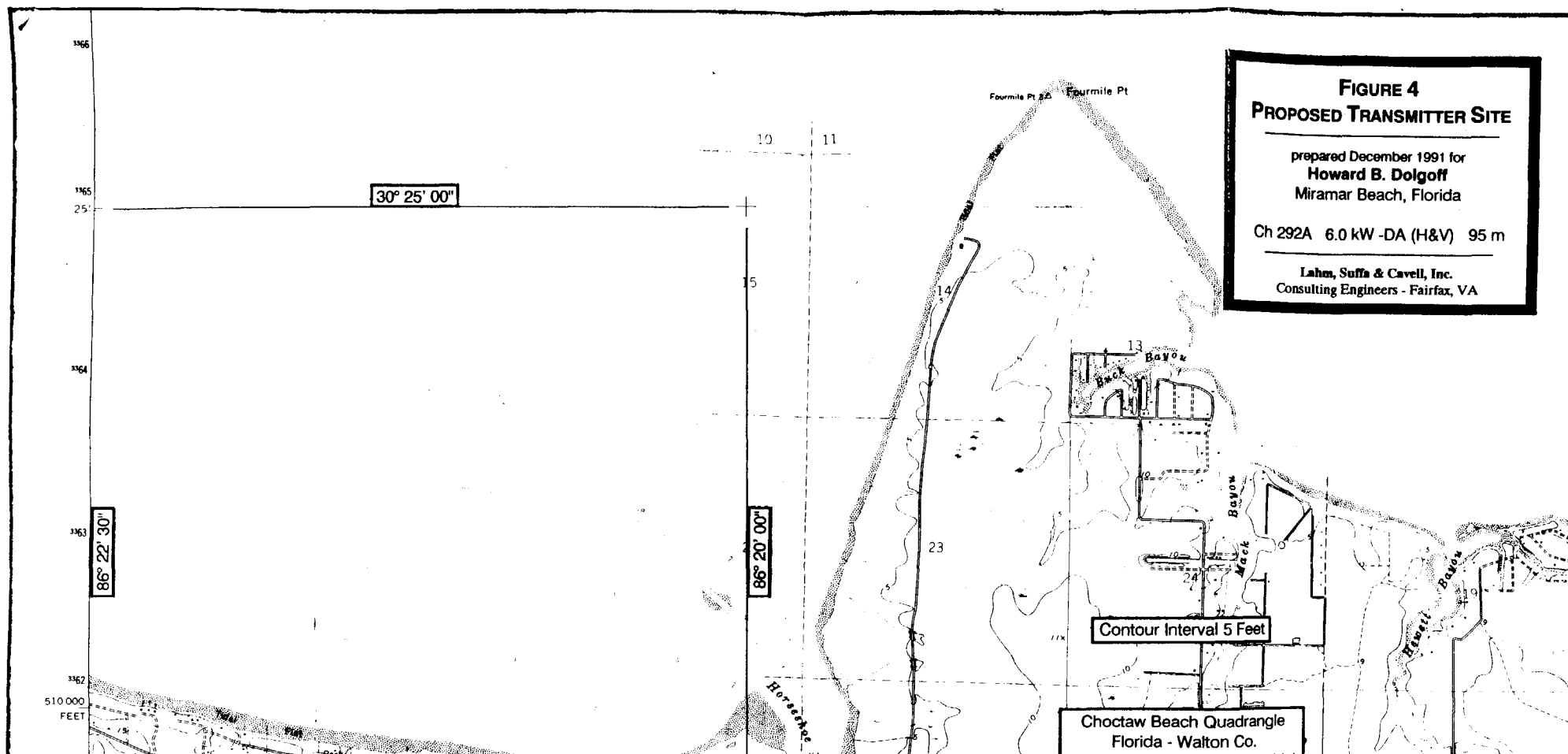
NGDC 30-Second terrain data used for all EAH calculations.











Statement C

**INTERFERENCE CONSIDERATIONS**

prepared for  
**Howard B. Dolgoff**  
Miramar Beach, Florida

Ch 292A (106.3 MHz) 6.0 KW-DA (H&V) 95 m

Howard B. Dolgoff (Dolgoff) proposes to construct a new FM station to serve Miramar Beach, Florida. The proposed facility would have maximum effective radiated power of 6.0 kilowatts at 95 meters above average terrain (AAT).

The site proposed for use by Dolgoff is a location used by WWAV, Santa Rosa Beach, Florida. There are several other broadcast facilities within 10 kilometers of the proposed facility. The site is located on a barrier island close to the Gulf of Mexico, so most of the area within the expected blanketing contour will lie offshore. No intermodulation or blanketing interference is expected with respect to facilities or radio receivers currently in operation. There are no apparent intermodulation combinations involving stations within 10 kilometers which could potentially affect stations located within 25 kilometers of the proposed site.

Although unlikely, Dolgoff recognizes that some interference may occur as a result of this proposed operation. In the event that such interference occurs, Dolgoff will take corrective measures to cure such interference to the extent required by the FCC Rules. Measures to be taken might include the installation of filters on transmitting or receiving equipment as determined by the nature of the interference.

### Statement D

## ENVIRONMENTAL CONSIDERATIONS

prepared for  
**Howard B. Dolgoff**  
Miramar Beach, Florida

Ch 292A (106.3 MHz) 6.0 KW-DA (H&amp;V) 95 m

The instant proposal is not believed to have a significant environmental impact as defined under Section 1.1306 of the Commission's Rules. Consequently, preparation of an Environmental Assessment is not required.

## Nature of The Proposal

This application proposes to locate a new FM station at the existing site of radio station WWAV Santa Rosa, Florida. The antenna will be mounted on an existing tower.

Statement D (con't)

considered, with the manufacturer's calculated maximum downward relative field of 0.525 at depression angles below 55°, the RF energy level near the base of the tower will be less than 1.4 percent of the applicable ANSI exposure guideline. That elevation pattern is shown in Figure 2-B.

Consideration has also been given to the RF energy levels contributed by WWAV. WWAV was assumed to operate with effective radiated power of 6.0 kilowatts. The center of radiation for the WWAV antenna is 95 meters above ground. At this power and height, the RF energy contribution *computed on a worst case basis* at ground level from WWAV is 4.4% of the ANSI guideline.

In a worst-case analysis, without considering antenna elevation patterns, the combination of facilities at this site will comply with the ANSI guideline. This site complies with Section 1.1306(b) the FCC Rules concerning human exposure to RF energy. Howard B. Dolgoff will ensure that appropriate warning signs are posted on the tower.

With respect to worker safety, the RF energy levels on the tower are expected to be below the ANSI guideline, except when the proposed FM station is operating. Dolgoff will negotiate a policy with WWAV to ensure the safety of workers on the tower, and will cooperate with the tower owner and any other future tenants in the policy implementation. Dolgoff will take any steps required to protect the safety of tower workers in areas where the guideline may be exceeded as a result of its operation, including but not limited to, time limitations on workers, power reduction or, if necessary, discontinuance of transmissions. This policy will not preclude the use of measurements to establish safe working areas or time limitations on workers.

**Conclusion**

The instant proposal may be categorically excluded from environmental processing under Section 1.1306 of the Rules.

Statement E

**EMERGENCY POWER**

prepared for

**Howard B. Dolgoff**

Miramar Beach, Florida

Ch 292A (106.3 MHz) 6.0 KW-DA (H&V) 95 m

Howard B. Dolgoff proposes to install emergency power generating equipment at both the studio and transmitter to assure continued operation in the event of loss of commercial power.